

## Abstract

The present invention relates to an apparatus for transforming digital TV broadcasting signals into digital  
5 radio broadcasting signals and a method thereof. The  
apparatus includes: a transport stream generator for  
transforming TV broadcasting signals outputted from  
outside into digital TV broadcasting transport streams; a  
10 broadcasting transport format transformer for generating  
digital radio broadcasting transport streams by  
transforming the digital TV broadcasting transport streams  
in conformity to a digital radio broadcasting transport  
protocol based on a radio broadcasting schedule; a digital  
radio broadcasting multiplexer for multiplexing the  
15 generated digital radio broadcasting transport streams  
generated in the broadcasting transport format  
transformer; a modulating/up-converting unit for  
modulating the multiplexed digital radio broadcasting  
transport streams in a modulation method of digital radio  
20 broadcasting and up-converting frequencies of the  
modulated radio broadcasting signals into radio frequency  
(RF) signals; and a high-power amplifier for amplifying  
and transmitting the up-converted RF signals through a  
transmitting antenna.